



**We've all heard catch phrases such as Carbon Footprint, Biomass fuels, Carbon Cycle etc. but what do they actually mean in a real world home heating situation. Without the bias of the green lobby on one side and the fossil fuel industry on the other the general concepts can be made a good deal clearer.**

The carbon cycle is an inherent part of the eco-system and has been since plants first evolved. In its simplest form plants use the energy from sunlight to trap carbon from which they build the material of leaves, stems and roots. When these plants die in the right conditions and in sufficient numbers some of this carbon is trapped in the earth's crust and converted through peat eventually to coal and Anthracite, by millions of years of pressure and heat. A similar process converts the oils in marine creatures into natural oils and gas. Under normal conditions the greater majority of this carbon would remain locked away and out of the carbon cycle for millions of years to come. That is obviously without human intervention. These sources of fuel are referred to as fossil fuels and can be considered as long cycle carbon reserves.

Although there are many complicating processes in the carbon cycles as a whole the second fuel source which is of interest to the domestic user are those classified as bio-mass fuels. These include logs, processed wood and its by products, card and paper etc. Anything which is the by product of living things trapping carbon and then being used directly as fuel. In industrial power production Willow and various fast growing Pampas grasses are regularly used as bio-mass fuels. But these are not practical in a domestic situation. These fuels can be referred to as short cycle carbon reserves, as the carbon is released during a short period of time compared to fossil fuels either by natural decomposition or by being used as fuel in our stoves. The benefit of short cycle fuels is that you are not adding carbon compounds to the atmosphere which were not already

present or which would be returned to the atmosphere by natural processes. With modern stove designs there should be no smoke of note produced and your household heating can be considered to contribute nothing to your Carbon Footprint, being effectively Carbon Neutral.

It is fair to say that a correctly installed DEFRA approved stove is one of a group of the most environmentally responsible domestic heating systems available, along with solar heating and ground heat capture. They can be used in Smoke Controlled areas and the initial outlay on the stove and installation is an investment which you will appreciate throughout several decades of use. Even if you take the green argument to its absolute extreme. After all when your stove reaches the end of its serviceable life, there are no composite materials and the constituent iron, steel and glass can all be re-cycled.

### **Articles authored By Any Taylor**

**Housewarming Selby, 56 Flaxley Road, Selby, North Yorkshire YO8 4BW**

**01757 212992**

**<http://www.housewarmingselby.co.uk>**

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